

Amendments To the Claims:

Please amend the claims as shown.

1. -38. (cancelled)

39. (new) A method for manufacture of a main body made of a nickel- or cobalt-based superalloy parent material comprising:

determining an area of corrosion on the main body by an eddy-current measurement using an eddy current probe which generates an alternating electromagnetic field at at least two different measuring frequencies (2mf) to ascertain a depth ( $\delta_{ICO}$ ) of the corroded areas,

wherein the at least two different measuring frequencies (2mf) include a low frequency (fl) used first and a high frequency (fh) used subsequently,

wherein the depth ( $\delta_{ICO}$ ) of the corroded areas is determined by the frequency change in the alternating electromagnetic field of the eddy current probe in relation to each of the at least two different measuring frequencies (2mf),

wherein the area of corrosion is oxidated carbide corrosion or sulfidized corrosion;

removing the corrosion area by cleaning the main body using a first cleaning process and a second combined cleaning and activating process different from the first cleaning process, wherein the first cleaning process is a grinding process and the second combined cleaning and activating process is a sputter process which activates the surface of the main body for an application of an anti-corrosive coating; applying the anti-corrosive coating, and

wherein the depth ( $\delta_{ICO}$ ) of the area of corrosion determined using eddy-current testing is determined in correlation to the applicable measuring frequency (2mf) by the equation  $(\delta) = [503 / (\sqrt{(f) \cdot \sigma \cdot \mu_r})]$ , where, ( $\delta$ ) is the depth of penetration of the eddy current,  $\sigma$  is the specific conductivity of the parent material,  $\mu_r$  is the relative permeability of the parent material, and (f) = frequency = the applicable measuring frequency (2mf),

such that the frequency (f) at which the influence of the corroded areas predominates changes in the alternating electromagnetic field of the eddy current probe determines the applied measuring frequency (mf) used in determining the depth ( $\delta_{ICO}$ ) of the corroded areas where  $(\delta_{ICO}) = 503 / (\sqrt{(2mf) \cdot \sigma \cdot \mu_r})$ .

40. (new) The method in accordance with claim 39, further including providing the results of the eddy-current measurement visible on an evaluation unit.
41. (new) The method in accordance with claim 32, wherein the main body is a gas turbine blade.
42. (new) A method for the manufacture of a gas turbine blade with a cast main body of a nickel or cobalt based superalloy parent material, comprising:
- testing a surface of the main body for the presence of a corrosion area of oxidated carbides or sulfidized parent material areas by eddy-current testing using an eddy current probe which generates an alternating electromagnetic field,
  - wherein a depth ( $\delta_{ICO}$ ) of the area of corrosion, which is determined using the eddy-current testing, is determined in relation to a measuring frequency (1mf),
  - removing oxide areas of oxidated carbides or sulfidized areas by cleaning the surface of the main body using a first cleaning process effective to remove the oxidated carbides or sulfidized parent material areas;
  - performing a second combined cleaning and activating process different than the first cleaning process, the second combined cleaning and activating process being ineffective for removing the corrosion area in the absence of the first cleaning process;
  - applying an anti-corrosive coating,
  - wherein the depth ( $\delta_{ICO}$ ) of the area of corrosion determined using eddy-current testing is determined in correlation to the applicable measuring frequency (1mf) by the equation  $(\delta) = [503 / (\sqrt{(f) \cdot \sigma \cdot \mu_r})]$ , where, ( $\delta$ ) is the depth of penetration of the eddy current,  $\sigma$  is the specific conductivity of the parent material,  $\mu_r$  is the relative permeability of the parent material, and ( $f$ ) = frequency = the applicable measuring frequency (1mf),
  - such that the frequency ( $f$ ) at which the influence of the corroded areas predominates changes in the alternating electromagnetic field of the eddy current probe determines the applied measuring frequency (1mf) used in determining the depth ( $\delta_{ICO}$ ) of the corroded areas where  $(\delta_{ICO}) = 503 / (\sqrt{(1mf) \cdot \sigma \cdot \mu_r})$ .

**Serial No. 10/661,190**

**Atty. Doc. No. 2001P02708WOUS**

43. (new) The method in accordance with claim 36, wherein the anti-corrosive coating is a MCrAlY type of alloy, wherein M being selected from (Fe, Co, or Ni), Cr = chrome, Al = aluminum and Y from the (Y, rare earths) group.